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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,278	03/23/2004	Minekazu Sakai	01-585	1840
23400	7590	03/16/2005	EXAMINER	
POSZ LAW GROUP, PLC 11250 ROGER BACON DRIVE SUITE 10 RESTON, VA 20190			KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

14A

Office Action Summary	Application No. 10/806,278	Applicant(s) SAKAI ET AL.	
	Examiner Helen C. Kwok	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>March 23, 2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 6-11 are objected to because of the following informalities. Appropriate correction is required.

In claim 6, line 4, it appears that the phrase "is a equipped to a formation" should be changed to – is equipped to a formation --.

In claim 9, line 4, it appears that the phrase "is a equipped to a formation" should be changed to – is equipped to a formation --.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 21, the phrase "the displacement-allowed direction" lacks antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent 6,539,803 (Mochida)

Mochida discloses a force measuring device comprising, as illustrated in Figures 10-17, a mass mounted on a semiconductor substrate 72 through beams in accordance with application of a dynamic quantity wherein the dynamic quantity is detected on the basis of variation of an electrical characteristic between each movable electrodes 87,88,89,90 formed integrally with the mass and each of fixed electrodes 85,86 supported at one end by the semiconductor substrate such that the mass is comprised of a plurality of divided masses 73,74,75 arranged in series and are connected together through connecting beams 76,78 for permitting the plurality of divided masses to be displaced so as approach to one another and move away from one another.

Furthermore, the plurality of divided masses comprise a first mass 74 and a third mass 75 located at both ends of the mass and a second mass 73 connected to the first and third masses located at the center position between the first and third masses. (See, column 16, line 26 to column 18, line 18).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,539,803 (Mochida) in view of U.S. Patent 6,796,180 (Katsumata).

With regards to claim 3, Mochida discloses a semiconductor substrate comprising a silicon film formed on the substrate wherein the plurality of divided masses and the movable electrode and the fixed electrode are formed from the silicon film.

(See, column 16, lines 34-41). The only difference between the prior art and the claimed invention is an insulating film formed on the semiconductor substrate.

Katsumata discloses an angular velocity sensor comprising, a semiconductor substrate including an insulating film and a silicon film formed on the semiconductor substrate.

(See, column 3, lines 46-54). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of employing an insulating film as suggested by Katsumata to the semiconductor substrate of Mochida since this is a well known concept for forming a semiconductor substrate using a SOI (silicon-on-insulator) substrate by a known micromachining process.

With regards to claims 4-5, the references, Mochida and Katsumata, suggests the silicon film surrounds the plurality of divided masses and the movable and fixed electrodes. (As observed in Figure 11 of Mochida and Figure 2 of Katsumata).

With regards to claims 6 and 9, it would have been obvious to an artisan in the art to have readily recognize the advantages and desirability of employing a cap for covering the plurality of divided masses and the movable and fixed electrodes on the semiconductor substrate since this is a well known concept to provide a cap from external interferences and to provide protection for the components positioned on the semiconductor substrate.

Allowable Subject Matter

9. Claims 7-8 and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

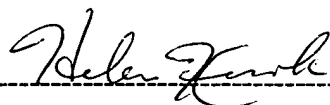
The reference cited is related to a sensor having two masses formed from a silicon on insulator wafer.

Art Unit: 2856

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
Art Unit 2856

hck
March 14, 2005